

**Job Title: Photonics Design and Test Engineer****Company Name: Eblana Photonics****Job Type: Full-Time/Permanent****Location: Cork & Dublin****Date: May 2019****Position Summary:**

Eblana Photonics Ltd. has a position for a skilled engineer/physicist to work on advanced photonic device packaging development with responsibility for managing design and test of a project demonstrator collaboration with the packaging group at Tyndall Institute, Cork. It is envisaged that the engineer may be based in Cork for the first 3 years and Dublin after project completion, and will provide key inputs and deliverables oversight to the project. In addition, the role will involve developing optoelectronic device packages and analysis capabilities to support internal development and production.

**Role Description:**

As a member of the Product Development team you will have a number of primary and secondary roles, including but not limited to the following:

- Project management
- Development of photonic integrated circuit packaging techniques including laser diode attach, chip mounting, fibre attach and high efficiency optical coupling, lens alignment and attach.
- Design of package components including submounts, TO-cans and modules. This can involve simulation of optical, thermal and RF characteristics of packages, the optoelectronic devices and their interaction.
- Assembly of packaged components for company development and production purposes.
- Optimisation of existing package performance.
- Reporting to the development team, within Eblana and potentially at public seminars.
- Laser chip on submount assembly process development and production.
- Optoelectronic device testing.
- Package quality and reliability assessment including thermal shock, vibration, stress test and accelerated lifetest.
- Simulation of package performance; thermal, electrical and RF/high speed.
- Training of colleagues in packaging and related activities
- Documentation of procedures and methodologies including for quality control.
- Design and build of fixturing to aid packaging and device test

**Key Qualifications & Skillsets:**

- B.A./M.S./Ph.D. in Electronic Engineering, Physics, Materials Science, Photonics or a related discipline.
- Experience in design of experiments, verification testing and root cause analysis. Have a demonstrated capability to analyse and report on complex results.
- Capable of optical system design, in particular waveguide to optical fibre coupling.
- Experience with miniature component packaging assembly; pick and place, soldering, gluing, and welding.
- Experience with HFSS, CST, Zeemax, Comsol or other optical, thermal and RF simulation software.
- Ability to collaborate closely with teams both within and external to the company
- Self-motivated and able to work towards goals without direct oversight

**Additional useful skills:**

- Direct experience with DC and/or RF high speed semiconductor device characterization, test and measurement.

**Contact: Dr. Brian Kelly, Director of Product Development and Manufacturing****Phone: +353 (0) 1 675 3232, Email: [brian.kelly@eblanaphotonics.com](mailto:brian.kelly@eblanaphotonics.com)**



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- Practical experience of III-V semiconductor device testing. Use of optoelectronic test components and instrumentation (e.g. photodiodes, optical and electrical spectrum analysers, current and voltage sources)
- Have a good grounding in semiconductor process science and device physics.
- Familiarity with IMEC and/or CEA-LETI capabilities regarding multiproject wafer runs.

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